

# American Bee Journal



45th Year.

CHICAGO, ILL., JAN. 19, 1905.

No. 3.



APIARIAN DISPLAY OF LOUIS WERNER, OF MADISON CO., ILL.,  
USED IN A STREET FAIR.



J. M. HAYNES AND APIARY, OF TAMA CO., IOWA.  
(See page 36.)

# FOR 1905.

We are always studying how to improve our goods. That's why we are leaders. No detail is too small for improvement. No expenses are spared to experiment and build new machinery. There are many advantages in buying Root's Goods. You can't get good goods cheaper; you save freight and time, and you are always sure of the very latest in apiculture. Below are our improvements for 1905.

## Honey Extractors

The honey extractors of 1905 have steel stampings in many places where gray iron castings were used formerly. These stampings are so ribbed and braced that the construction of the baskets will be much stiffer than formerly with no possibility of any of the parts breaking.

## Wire Imbedder

Our new spur wire imbedder is a great improvement over the old one. Although it costs 20 cents and the old one sells for only 10 cents, it is 10 times better. It does very neat, pretty work and the special construction of the teeth with the groove makes it easy to follow the wire during the process of imbedding.

## Perforated Zinc

A complete new set of dies and press have been made during 1904 for turning out perforated zinc, so that our 1905 product will be even better than before.

## Smokers

Some minor improvements have been made in our smokers by which the blast will be increased and the general construction throughout stiffened. A very neat and strong brace is placed in such position that the legs supporting the cup or stove can not be twisted or bent out of shape without crushing the whole smoker.

## Fences

Some of our fences for the supers will be nailed as well as glued. This will enable the user to clean off the propolis by immersing them in boiling water, a fact which will be appreciated by many.

## Root's Automatic Extractor

We have got it at last. An automatic reversible honey-extractor that will reverse the pockets while in motion by simply pressing on a lever. The extractors are no larger than the Cowans, and reverse without bang or slam, provided the directions are followed. They are equipped with street-car band-brake, noiseless gearing, gearing on top of the reel out of the honey, and out of the way of putting in and removing the combs. We have the 4-frame size all ready for delivery. Six-frame, 8-frame, and 9-frame sizes will be ready shortly. Price will be only \$2.00 above the regular price for 2, 4, 6, and 8 frame Cowan extractors, respectively.

## Wax-Tube

The Van Deusen wax-tube fastener is made of one piece of brass tubing drawn down to a point. It is a much neater and better tool than the one sold last year.

## German Wax-Press

The German wax-press is now so improved that it has a threefold use. First, as a wax-rendering device and press to squeeze out slumgum clear of wax. Second, as a press for squeezing honey out of cappings, bits of burr-combs, chunk honey and the like. Third, as an uncapping can for uncapping combs preparatory to extracting. This last feature will prove invaluable because the cappings will drop into the basket, and when the uncapping is done the cappings can be squeezed until they are dry, the honey running out at the spout. Three machines for the price of one. And our price has been reduced to \$12.00.

## Bee-Veil

Our bee-veil for 1905 will have rubber cord sewed in the bottom edge so that the top as well as the bottom will be elastic. If the directions are followed the edge of the veil can be made bee-tight around the waist or coat, effectually protecting the wearer. We will still furnish veils with silk binding and when called for can supply them.

## Cover

The Excelsior cover will look about the same as before except that its construction will be simplified and strengthened, making it better in every way to withstand extremes of hot and dry weather. It will be used on all our hives including the Danzenbaker, as it has stood the test of many years, and for a general purpose cover we know of nothing better.

Ask for our Catalog. A postal brings it.

# THE A. I. ROOT COMPANY,

FACTORY AND EXECUTIVE OFFICE,

## MEDINA, OHIO.

### BRANCHES.

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# AMERICAN ESTABLISHED IN 1861 BEE JOURNAL THE OLDEST BEE-PAPER IN AMERICA

Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

Published Weekly at \$1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor.

CHICAGO, ILL., JAN. 19, 1905.

VOL. XLV.—No. 3.



## Editorial Notes and Comments

### Popularizing the Value of Bees and Honey.

Last week we mentioned having received a beautiful bee and red clover calendar from Mr. W. F. Marks, of New York. Since then we got the following letter from him concerning it, and offering a further suggestion:

DEAR MR. YORK:—Yours of the 5th inst. received. I hasten to say that I am not entitled to *any credit* for the design on the calendar in question. The design is used as a cover for the Red Clover Writing Pad, sold at many stationery and book stores. I only took this means of calling your attention to the design, which I considered very unique and appropriate for bee-culture, and it seems to me it embodies a suggestion that we, as honey-producers and bee-lovers, should be prompt to grasp.

For instance, how can we reach the great mass of the people any quicker and easier than by placing a school writing pad upon the market with an appropriate and attractive cover design, one page devoted to the natural history and importance of the honey-bee, a denial of the comb-honey canard, and the importance of honey as food, etc.?

It seems to me that such a pad placed upon the market would naturally go into thousands of schools, and tens of thousands of homes, and having an intrinsic value, it would be preserved, read, re-read, and remembered by the class we want to reach. We could have such a pad manufactured for us in large quantities, and could dispose of them at wholesale at a price sufficient say to cover expense; in fact, we could, under the circumstances, sell them at less than cost, but that would not be necessary, and certainly not a good business proposition.

Perhaps this suggestion is visionary, but I trust you will not put it aside without giving it careful consideration.

W. F. MARKS.

We believe the suggestion Mr. Marks makes is a good one, and ought to be followed up by the National Bee-Keepers' Association. No doubt there are many other things used by school children that might have printed on them something about bees and honey. We really think that if the Board of Directors, of which Mr. Marks is chairman, would take hold of this matter some of the funds of the National could be better invested than in some other ways that might be recalled. Such expenditure would be along the line of advertising a wider use of honey, and thus would help increase its demand. Whatever increases its demand, if persisted in, will surely help the price of honey, and thus be a benefit to every honey-producer.

Why not put a little thought along the line suggested by Mr. Marks and others, and see if a more extended use of honey can not be secured? There seems to be little trouble

now about producing honey. What is needed is a larger demand or outlet for it. The National Association can do no better, we believe, than to put some of its effort and money in the direction indicated.

### Doolittle's Queen-Rearing Methods.

The following item appears in *Praktischer Wegweiser*:

"The Doolittle American method of bee-culture—also much extolled by many German theorists—appears, according to the *Imkerschule*, not to fulfill expectations; indeed, even Americans themselves are allowing it gradually to sink into oblivion; for them, also, nothing excels after-swarms for queens, quality considered."

Our worthy contemporary, the *Wegweiser*, may say to *Imkerschule* that some one has been fooling it; the Doolittle plan, under different names, and with more or less variation, is more firmly established in this country than ever before. The probability is that if all queen-breeders had to depend upon after-swarms to the exclusion of Doolittle cells, many of them would go out of the business. Indeed, it is getting to be considered more or less of a reproach to have afterwarms at all.

### Illinois Leads in the National Association.

We learn from General Manager France that there are now more members of the National Bee-Keepers' Association in Illinois than in any other State. The others in order follow thus: California, Wisconsin, New York, and Texas. All other States have less than 100 members each. Illinois has over 300. New York State, at one time, claimed to lead in membership, and, if we remember, some one from there thought on that account New York was justified in having three of the twelve members of the Board of Directors. Illinois has only one member on that Board, and we don't know any one in this State that thinks we should now have one-fourth of the Board. Of course, New York is not to blame for having a majority of the Board. They were all duly elected by ballot by the membership. It is simply New York's good luck, or because she has so many able bee-keepers.

### What is Honey?—Definitions and Standard.

This question has often been asked, and has recently come up again. Prof. A. J. Cook, of California, answers it in this way:

I have been amused at the way this question has been answered by several of our bee-keepers. I feel certain that there is but one legitimate logical answer. Honey is the sweet that bees store in the hives. It is impossible to give any other answer. It usually is digested nectar, for its source, for the most part, is from flowers. But no one can know at any time that there may not be an admixture of honey-dew, cane-sugar, possibly filched from some store, or,



more likely, juices from various fruits. In any event, when nectar passes to the bee's honey-stomach, it is so changed that we may well call it "honey", as it is put into the comb.

I have fed pure cane-sugar to bees and have had the resulting honey sampled by experts, and they not only pronounced it honey, but the best they had ever eaten. This kind of honey though would always be too expensive to put on the markets. I notice in the last Bee Journal it is suggested that honey-dew honey is not honey because it is not collected from flowers. I have known such honey to be of rare excellence. Indeed, I believe that not a little of the very best honey often sold as basswood or clover comes from honey-dew. I believe that the secretion of nearly all our aphids will produce a honey of superior flavor and excellence. This is no mere guess, but the result of actual observation for a series of years. A. J. COOK.

Under "Food Definitions and Standards", a circular recently sent out by the Bureau of Chemistry of the United States Department of Agriculture, there were "schedules prepared by the Committee on Food Standards, Association of Official Agricultural Chemists". They referred to "sugars and related substances". Of course honey was included, and the following were suggested as the definitions and standard:

1. *Honey* is the nectar of flowers and saccharine exudations of plants gathered and stored in the comb by bees.
2. *Comb Honey* is honey still in the comb.
3. *Extracted honey* is honey which has been separated from the comb.

*Standard honey* is honey which is levo-rotatory to polarized light, contains not more than twenty-five (25) percent of water, not more than fifteen one-hundredths (0.15) percent of ash, nor more than eight (8) percent of sucrose.

These suggested definitions and standard of honey were sent out in order to get the opinions of various experts before adopting them, and so were "subject to revision". We are inclined to think that the "definitions" given are fairly good. As to the "standard", we are not chemist enough to say.

Perhaps others of our readers besides Prof. Cook, who have made a study of this subject, would like to express themselves. If so, our columns are open.



## Miscellaneous News & Items

Our Advertisers, we believe, are a lot of most honorable and reliable firms. We are glad to recommend them to our readers. We also believe they are all reliable in their dealings, c'se they could not get into the advertising columns of the American Bee Journal.

When writing to any of them, we would like to urge you to mention having seen their advertisement in the American Bee Journal. This would help both the advertiser and us. The more business they get from having their advertisements in the American Bee Journal the better satisfied they will be with it, and the more they will advertise in it hereafter.

Scarcely any periodical published to-day could exist if it depended entirely upon its subscription price. So the advertisers are a great help. This journal is no exception to the rule in this regard.

We want the American Bee Journal to be a benefit to its advertisers as well as to its regular subscribers. Their interests are mutual. We would like to bring them nearer together, so that each will understand the other better.

In and through it all, the American Bee Journal desires

to be helpful in every possible way to those who either read it or advertise in it. All we want is the permission to do our part.

**Not Quite as Gentle.**—In the letter from Fred Bechly, of Poweshiek Co., Iowa, on page 14, he is made to say that he finds the golden Italian bees quite as gentle as the three-banded. It should have read "not quite as gentle".

**Temperance Life Insurance Company.**—Your attention is called to the advertisement of the Total Abstinence Department of the Security Mutual Life Insurance Company and the National Total Abstinence League. This department has had an experience of nearly four years and a half. The mortality ratio proves, beyond doubt, that abstainers are desirable insurance risks.

**The Apiary of J. M. Haynes** is pictured on the first page this week. Concerning himself and his apiary, Mr. Haynes wrote as follows when sending the photograph:

I am 55 years old, and have been a farmer all of my life. I have 391 acres of land. As my health failed so that I couldn't do heavy work on the farm, I went into the bee-business. I have 90 colonies under a shed the year around. The bee-shed is 6 feet wide. The front is 8 feet high, sided down half way. The hives are set at the front, so I do the bee-work behind them under the shed. The shed runs 64 feet north, 68 feet west, and 64 feet south. I use the Langstroth 10-frame hive, with 28 sections in the super. I don't extract any. I let the bees do the work, and I sell the honey.

It was a poor year here for honey the past year. It is worth 19 cents a pound now. J. M. HAYNES.

**The Defunct Honey-Producers' Association**, referred to in an item on page 30, is thus commented upon by H. L. Weems, of Kern Co., Calif.:

EDITOR AMERICAN BEE JOURNAL:—With only the friendliest and kindest feeling for all concerned, I can not silently see what seems to me, in the clipping from the Kingsburg (Calif.) Recorder of Dec. 14, a gross injustice to the manager of the defunct Central California Honey-Producers' Association.

I was a stockholder in that organization, and suffered as great pecuniary loss as any member in it. Therefore, I believe I am as much entitled to discuss the mistakes of its management as any one. It is true there was lack of confidence. Not in the manager particularly, but among all the stockholders. With but few exceptions each was suspicious and distrustful of his neighbor almost from the very beginning of the organization. Each locality was jealous of every other locality. Each had its own plan for perfecting the organization, and all other plans were radically wrong. There was no spirit of concession or compromise. So that it was impossible to perfect an organization wholly satisfactory even to a majority of the stockholders.

Every meeting was an occasion for prolonged, and, in certain instances, acrimonious debate. Every one was honest and sincere in the belief that his view was the only correct one, but suspected the honest motive of his neighbor. On this account it was impossible to secure the adoption of a code of by-laws.

But through all these stormy scenes there was not one who commanded greater respect and confidence than the president and manager of the Association. This is evidenced by the fact that he was elected and re-elected, and his offer to resign afterwards declined. It was through his efforts and sacrifice of time, money and personal interest, more than any other, that the organization lived as long as it did.

It was he who made the interest of every bee-keeper his own personal concern, and sought to reconcile every conflicting interest that arose. It was he who came to the support of the editor of The Recorder, when, as publisher of a bee-paper at Tulare, afterwards the Western Bee Journal, he was fighting against odds for a place among publishers of bee-literature. The support given at this time was loyal to the last degree. It was loyalty itself. The new bee-paper's friends were his friends; its foes, his foes.

The Central California Honey-Producers' Association

is a thing of the past, but its failure to live and prosper is not the fault of any one man. The organization was formed for the express purpose of marketing honey collectively in car-loads through a single head. The stockholders refused to fulfill the purpose of its creation by adopting by-laws and giving the Association control of their honey when ready for market.

Not more than 10 percent of the stock issued was fully paid for, and without any honey to handle it was not surprising that "the condition of the business for the past year looked bad". The only wonder is that any one would expect a business to succeed without cash, credit, merchandise, or other resource to start on. Tall oaks from tiny acorns grow. But it takes time and plenty of sap. Of course, the "benefits received were very slim".

The editor of The Recorder was himself a member of the Board of Directors of the Central California Honey-Producers' Association, and, with the other members of that body, directly responsible to the stockholders for the conduct of its business. If any discredit attaches to the management he should either accept his just share or else make it clear that he was in the minority in all its transactions; in which case it will be hard to make the manager's one pair of shoulders carry it all. H. L. WREMS.



## California as a Home and for Bee-Keeping.

PROF. A. J. COOK.

MR. BROWN, a long-time bee-keeper of Ontario, Canada, and as long a subscriber to the American Bee Journal, asks me many questions about California. Similar questions have been asked by a good many of late, and though I have replied to such inquiries before, it has been some time since, and the numerous new subscribers that come in each year will certainly find it wholly new. The fact that Mr. Brown, one of our most experienced and intelligent readers, desires further details makes it seem probable that the matter will not be without general interest.

It has been my privilege to live in four of our States—Massachusetts, Illinois, Michigan, and now California. Of these, it seems to me California is incomparably superior as a home. Indeed, if one has pleasant employment, I do not see how he could wish for more than a home in this beautiful Southland. The scenery is certainly all that one could wish. The rugged mountains with their bared cliffs and the ever-varying hues of light and shadow become more and more entrancing as one lives among them. I have heard it said of California, as I have often heard it said of Washington, D. C., that any one who has sojourned here for a short period is never content to live elsewhere. I believe our grand old mountains have much to do in creating this fondness. The climate of California has even more to recommend it. It is always summer. Even this day after Christmas I have been choring around without coat or vest, and with no discomfort. To me the summers are equally pleasant with the winters, and I should regret to feel that I could not always spend my days in this blessed land of warmth and sunshine.

I am also very much attracted to California because of its great variety of fruits. There is not a month of the year that we can not pick ripe fruit from tree or vine. Not only is the variety of our fruit surprising, but its quality for the most part is equally worthy of praise. Of course, in these days of rapid transportation, any table anywhere in our land may always be graced with the finest of fruit, yet there is a pleasure in stepping out and picking it from one's own tree—watching it grow and mature—that I find most delightful. It would take a pretty big inducement to wean me from the splendid orchards of our Southern California.

I should also mention water as one of our great attractions; not its abundance, for that is our great lack, but the fact of the possible absolute purity of our water is to me one of the prime attractions of our regions. Let me take Claremont as an example. Our water is pumped some hundreds of feet. It is received into a covered reservoir with

two separate compartments. From these it runs in underground pipes till we draw it from our hydrants. Thus we see that there is no possible chance of taint, and such dreaded scourges as typhoid fever may surely be barred out. What is true of Claremont may and will be true some day of nearly our whole region.

I have kept the best for the last. I now refer to our people. I doubt if for intelligence and morality they are surpassed anywhere in the world. We might almost be called New New England. And as I have lived in Massachusetts I am free to say that I think the "New" is an improvement. There is a generous responsiveness, a willingness to lend a helping hand among the people of Southern California that one rarely sees. So far it has been a very prosperous country, and it is possible that it is this that has awakened these generous impulses in our people.

But now we come to the other side of the question, the delights of living in this region are so many and so patent that they have been noised abroad. The salubrity, too, of our climate brings many here for health. This may make it difficult at times to secure just the employment one would like. Yet it seems to me that this depends very much upon the person. As for myself, I have often wished that I might be two or three men, for I am sure I could keep each one happily employed. Thus, while I would not wish to induce any one to come here with the certain expectancy for work to their hands and to their living, I have never yet seen willing hands idle. Indeed, there has been a good deal of complaint of scarcity of labor in our orchards. Surely, orchard work is very pleasant, though it is particular work, and I can readily see how by a little carelessness, or want of interest, one would soon cease to find employment. I doubt if there is any more interesting manual work in the world than caring for an orchard. At the same time I doubt if there is any work that requires more painstaking care in every detail. Orchard culture here is intense, carried on in a perfection that is truly admirable. Thus, the slovenly or indifferent worker will surely have trouble to find employment.

I have often written of bee-keeping. When we get a good honey-year we eclipse the world. Enthusiasm, however, will be modified when I state that such years are not oftener than one in three. The second of the three will be indifferent, while the third will be attended by actual absolute failure. Even with this showing our best bee-keepers average 75 pounds per colony per year, and the honey crop of a single season, with some of our apiarists, reaches to several car-loads and to several thousands of dollars.

Mr. Brown asks if we would need to serve an apprenticeship here. I think not. Bee-keeping is much the same everywhere. Here we have no trouble with winters, but, of course, in our years of drouth feeding is strictly in order. The expert bee-keeper would at once see the point, and a little talk with a good apiarist would make him capable of handling his bees profitably. Such men as Hatch, Hambaugh, and others—excellent bee-keepers East—come here and take a front seat at once. I do not think that any one who has made a success of apiculture in the East need fear to try it here. If he selects his location carefully I do not think he could do better in any other part of the world.

If I have not answered Mr. Brown as fully as he wishes, or if any reader of the American Bee Journal wishes more information and will ask specific questions, I shall be glad to answer them as best I may.

Los Angeles Co., Calif., Dec. 26.



## No. 2.—What is the Best Bee-Hive?

BY ALLEN LATHAM.

(Continued from page 22.)

IN spite of all I have said in favor of the closed-end frame, I should hesitate to adopt it and hang it lengthwise of the hive, for it needs to be hung crosswise of the hive, that is, parallel to the entrance, if it is to fulfill its mission. In like manner little is to be gained in hanging frames across the hive, if at the same time they are free-hanging, for crosswise hanging and closed-ends are a pair which must go together—complements which make a whole.

Read what is said on pages 468 and 469 (1904). There you may learn that most of the fraternity are against a crosswise-frame, while, though several are non-committal, only one or two come boldly out in its favor. Permit me to take up the objections as offered and treat them as they deserve.

First, a few prominent bee-keepers say that such a



frame is not in common use, and they wish one which is standard, that is, used by the people. Well, once upon a time it was the custom to take the corn to mill on horse-back, and when the bag was only half full to put a stone in the top to balance the bag across the horse. One day a stupid boy was too lazy (?) to find a stone, and so after tying the bag divided the corn into equal portions, hour-glass style, and thus threw it across the horse. "Here, boy", says his father, "why do you load up in that silly way? Isn't the way your father, your grandfather, and his father before him, carried corn to mill good enough for you? Hustle now and find a stone, or I will put the cane to you."

One says that wax-worms are worse in hives with such frames. All that I can say is that the wax-worm knows a good, warm place when he finds it, and will take it every time, if he can.

It is stated that bees build less even comb. This seems to me quite likely, though I have had many beautiful flat combs built in such frames. At any rate, it is a minor matter since comb foundation is so generally used. It is surely not an objection of sufficient weight to rule out such a frame.

Another says that such frames will call for new supers, basing his suggestion on the supposition that the crosswise frames will be of such size or number that the hive will be of a different size. This does not follow, and hence the objection can not hold.

Too short for brood-combs, says another. Why? My crosswise frames are 10 by 12 inches, and 11 in number, and they seem to work all right.

Too short for outdoor wintering. Yes, indeed, if hung lengthwise and free, but not otherwise. Try it and be convinced.

More frames to manipulate. This objection is made on the ground that the old size of hive-body is still used with the entrance at the narrow end as before, and is a reasonable objection. It is true that more time is taken in going through 12 frames than in handling 8 or 10, but if one handles bees as little as he needs rather than as much as he is moved to, I think that he will find little trouble with the extra number of frames. I find, too, that I handle practically no more, for it is not necessary, as a rule, to handle more than three or more frames for nine out of ten purposes in manipulating frames, and the smaller the frames the easier.

Interferes with free passage of bees. Prove it. If one will study the bees in an observatory hive he will see much that will lead him to believe that this objection is without foundation. The only time when bees need extra passage is when honey is coming in rapidly. At such times supposedly the bees find a readier passage through the hive by traveling on the end-bars. So, once it was believed that the earth was flat. Space will not permit me here to go into details to show that this objection is utterly without weight. I can only deny it with the assurance of one who has seen proof to the contrary.

It gives the bees less chance to ventilate the hive. This objection would condemn the crosswise frame if I had not found a way clear to get around the difficulty. By having the space below the frames about an inch deep in front and decreasing as it goes back till it is a scant bee-space under the last frame, ample opportunity is given the bees to ventilate their hive. Mind you! gives the bees opportunity to ventilate the hive themselves, does not allow Nature to do it the very time when the bees don't want it done; for that is just what the free-hanging frame, which is lengthwise, does.

By far the greatest number of those who answered the query on page 468, raised the objection that such a style of frame would not allow the tilting of the hive forward to let the water out. Well, I always was opposed to this tipping-forward plan, for, to my mind, the hive ought to be level all around, but the water is objectionable, and, forsooth, how can you get rid of it except by tilting the hive? It really ought to make a thoughtful person smile to read this objection. If the crosswise-frame is a thing of value shall we let such a little difficulty prevent our adopting it? In my own hives I simply slope the bottom-board, as will be seen from what I say above in regard to space below the frames, and I have the satisfaction of seeing my hives stand up straight like my house. By the way, why not tilt your house to keep the rain from getting into the front door?

Now it is really unkind to make fun at all, for do we not know that nearly all of those good brothers were asked to answer a question concerning which they had only opin-

ions without experience? Listen to what one who has had the experience says:

"R. C. Aikin (Colo.)—Practically none. I have used extensively such in the past; they are better for nearly every purpose than the long Langstroth frame. They cost a little more, but that is a very small item. First cost is a trifle if it gets better results later. Without a detailed argument, let me say that I *know* short frames are all right for results in breeding, and the super arrangements can easily be adapted."

Thus speaks one who knows. Such a statement should have great weight, and should carry conviction to the extent of causing many to try a few hives the coming season with such frames.

New London Co., Conn.

(Concluded next week.)



## Our Sister Bee-Keepers

Conducted by EMMA M. WILSON, Marengo, Ill.

### Paste for Rough Skin.

For rough, harsh skin of arms and shoulders mix a quarter pound of unsalted lard, which has been washed in rain water and then in rosewater, with the yolk of an egg and a tablespoonful of extracted honey. Add enough oatmeal to make a paste. Spread on the arms and leave for an hour.—Chicago Daily.

### Starting in Bee-Keeping.

Here is a clipping from the woman's department of the Chicago Daily News, being a reply to an inquiry, which is remarkable for the wholesome moderateness of the expectations it arouses:

"I kept bees for many years, and at present have about 10 colonies. Twenty-five dollars would buy about 6 colonies at the cheapest. Then it would require about \$15 worth of supplies—that is, supers and sections for the bees to store the honey in, to say nothing of the work. In a very good season they would average about 70 pounds per colony.

"The last three years the bees had one good season. In other words, every third year is a failure. Some winters bee-keepers lose from 30 to 50 percent in bees. To make a living at bee-keeping would require 125 to 150 colonies, which would cost, including all tools, extra hives, supers, etc., \$800 to \$1000, besides a number of years' experience. One can't get enough of that."—A. H. O.

### "Hiving Bees with a Shot-Gun"—Pleasures of Bee-Keeping.

I have been a reader of the American Bee Journal for nearly two years. Having charge of an apiary of from 20 to 40 colonies, my experience with bees has been both interesting and profitable. Our apiary produced 2300 pounds of comb honey, mostly in one-pound sections.

There are many interesting items in the American Bee Journal. The article in Dec. 15th number, on "Hiving with a Shot-Gun", excels anything I ever read in the way of hiving. For marksmanship it is beyond parallel—he must have telescopic vision to be able to give the dimensions of a twig 50 feet from the ground, and to arrange the hive so accurately that the cluster fell in exactly the right place. Verily, this is a remarkable age. Bee-culture opens a field of varied and practical knowledge, the pursuit of which is one of the great pleasures of life.

We anticipate much from our apiary the coming season. I am one of the bee-keeping sisters, although not enrolled as a member.

L. FREES.

Davis Co., Iowa, Jan. 3.

Sometimes the written description of a thing makes it appear more difficult than it really is, and it is just possible that if you had been an eye-witness of Mr. Stolley's performance it would not appear so remarkable, although certainly a novice would hardly succeed as he did. I don't know how many hunters there are with you, but "in this

locality" there are many who would scorn to aim at the bull's-eye at so short a distance as 50 feet, as a test of their marksmanship, and they would by no means consider his aim as beyond parallel. You think "he must have telescopic vision to be able to give the dimensions of a twig 50 feet from the ground", but you forget that all he would have to do would be to pick up the said twig and measure it after it had fallen to the ground as the result of his good aim.

It doesn't look as if you or I could squint at a swarm 50 feet in the air and make a correct guess first time as to where the swarm would fall, but by standing straight under it a fair guess might be made. The secret of Mr. Stolley's correct guessing, however, he explains in that phrase, "By taking the proper bearings at right angles". I've seen Dr. Miller do that. He would stand off a little distance, and, looking up at the swarm, would then drop his eye to the ground and estimate where a line would fall that would pass through the point directly under the swarm. He could guess pretty well where that line would be, but he couldn't guess closely how far from him the point should be. However, he'd set the hive somewhere in the line, then he'd go off to one side and estimate a line at right angle to the first line, moving the hive accordingly, and after going backward and forward from one line to the other, he could pretty soon determine just about the right point.

We sisters might sight and cross-sight as well as a man, but when it comes to firing the gun most of us would rather call a man.



## Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.  
By E. E. HASTY, Sta. B Rural, Toledo, Ohio.

### INVITATION TO YOUNG BEE-KEEPERS.

Here's a gold eagle going a-begging—or, say, a roast pig running around squealing for somebody to eat him. Many young people like to write letters, I believe; and they mostly know they are not welcome to write to persons of note and station. If they should do so their letters would receive a hurried glance or two from a secretary, and then be pitched into a big waste-basket; and that would be the last of it. But here is a man of note that asks as a favor that young bee-keepers would write to him. Looks as though he has an attack of bee-fever. He has plenty of chance to read the wisdom of bee-doctors; but he wants to hear the experiences of other patients, especially those who know a good deal less than himself. So if you are under 18, and have been doing something with bees, write and tell him all about it. If nothing new or strange occurred to you that is no bar. The just-what-might-be-expected things are about as welcome as exceptional things are. He reproves us for neglecting the common things of Nature and running all the time after exceptional things. The man is Dr. Edward F. Bigelow, Stamford, Conn., editor of the Nature and Science department of the St. Nicholas Magazine. If he should not have time to write individual answers to all his young correspondents never mind about that. Have faith to believe he reads and enjoys what he has asked for, until a wholesale answer comes in his department of the magazine. Page 804.

### LOSS OF YOUNG QUEEN IN MATING.

Young queens at mating-time often turn up missing from the place where they ought to be. The credit of this is usually given to birds, to dropping into trouble of some kind, water for instance, or to entering the wrong hive. As to the latter, the almost universal assumption has been that they do so by mistake. Adrian Getaz suggests that often there is no mistake about it—hives they try not the ones they would blunder into, if that was it, but distant and manifestly not-like-home places. If I may piece out a hint, they hover near the entrances of one colony after another until they find one where the smell, and the absence of hostile motions on the part of the guards, encourage them to make an attempt; and there they try it for live or die—often killed, occasionally accepted. How is this? I suspect there is a good deal in it. It assumes, of course, that

the queen has, from some cause, a deep-seated dislike to her own proper station. "Baby nucleus" too-much, hive too open and drafty, too much syrup and too little honey, bees all of one age instead of properly assorted, nation with no national spirit, are some reasons that occur why a queen of high ambition might want to change. It is quite imaginable that the odor of a queenless colony might be perceptibly different from that of a colony with a queen. But when she doesn't find a queenless one she seems to try the next best one.

I hardly agree with him that a comb of honey presented, in a bucket or otherwise, is always attractive to a swarm. If the bees of the swarm are in a hungry condition (and that often happens) then they are very ready to climb onto a comb of honey. When they are distended with honey already (condition according to that usually described in the books), it has seemed to me that they regard a comb of honey poked at them as a sort of an insult. Pages 807, 808.

### A LONG-TIME OUT-OF-DOORS BEES.

Ten weeks is a long time for a clipped queen and a few dozen volunteer bees to remain homeless out-of-doors. Still, it is possible that Wisconsin is right as to the origin of the little cluster that he found. If so, those bees were miracles of faithfulness and persistence in their attempt to make something out of a hopeless situation. We may well take off our hats to them. They keep one another warm part of the time, and grin and bear the cold and the wet the rest of the time. They take turns at bringing temporary lunch from the fields when there is any to be had, and suck their paws when there is none. Doubtless they often tried to move the dismembered queen to some other location by that bee-panacea, the process of "swarming", but always went back to her when she proved immovable. Page 810.



## Doctor Miller's Question Box

Send Questions either to the office of the American Bee Journal,  
or to Dr. C. C. MILLER, Marengo, Ill.

### Depth of Supers on Langstroth Hive.

What should be the exact depth of supers used for both comb and extracted honey on Langstroth hive?  
IOWA.

ANSWER.—Supers vary in depth for the same hive, the depth depending entirely upon what the super is to contain. A super for a tall section will, of course, be deeper than for one not so tall. The depth should be about one-fourth inch more than the depth of the extracting-comb or of the section, together with any addition that must be made for any top or bottom bar that may be over or under the section.

### Effect of Putting Bees on Drone-Combs.

If eight brood-frames were filled with foundation of drone-size, placed on a strong colony during a flow, and after the combs are completed and the honey extracted, and a strong colony with a fertile queen placed on the combs, would the queen lay only drone-eggs, or would the bees change part of the combs or rear workers in drone-cells?  
OHIO.

ANSWER.—I don't know what your bees would do; but I'll tell you what mine once did. I put a colony on drone-combs, and the queen wouldn't lay at all—the bees just swarmed out. It is possible, however, that in some cases they would stay and work; if so, I should expect them to contract the mouths of the cells to worker size and rear workers in them. I've known them to do that when part of their comb centrally located was drone-comb.

### Running an Out-Apiary.

I have run an out-apiary of 100 colonies of bees for the last 10 years in connection with a farm, but I am giving up the farm and want to go more extensively into the bee-business. I intend to keep the 100 colonies on the farm, but I have a village lot about 2 miles away on which I wish to keep 50 colonies. Would it do to have one with queen-guards on all through swarming-time, keeping all queen-cells cut out and all brood well spread—that is, for producing extracted honey? I would probably not be able to go to the yard more than twice a week.  
CANADA.

ANSWER.—If you cut out all queen-cells twice a week and keep brood spread, with colonies run for extracted honey, there ought to be



little trouble with swarming. Yet cutting out cells, even twice a week, will not make an entirely sure thing as to swarms. Sometimes a colony, after being thwarted a number of times, will swarm with not a queen-cell in the hive. Even if the plan were always sure, it would be a lot of work to cut out cells twice a week. Shaking swarms as soon as each colony showed queen-cells would probably be as reliable, requiring a visit to the apiary once every seven to nine days. Another way would be still less trouble, and although not entirely successful with all, it is with some, and might be with you. As soon as you find queen-cells in a hive, take the hive off its stand, put on the stand a hive with empty combs, foundation, or starters, find the queen and put her in the empty hive together with the bees that are on the comb with her, and shake into the hive the bees from the other combs, or most of them; cut out all queen-cells, put a queen-excluder over the hive on the stand, and set over that the hive with the brood-combs. The bees will gradually fill the lower story, and at the same time the brood will hatch out above the excluder, and those upper combs will become extracting combs. Another thing that will help to keep down swarming is to allow an entrance to each story; move forward the second story until there is a  $\frac{1}{4}$ -inch space at the back end between the stories, and if you have three or four stories allow a space of the same kind over each one.

### T Tins—Economizing on Hives—Wintering Bees—Sheep in the Bee-Yard.

1. What are T tins, and what are their advantages?  
2. I have a plan to prevent buying more new hives after securing a desired amount. One usually has a few empty hives in the spring, and I put the first swarms that issue into these, putting the parent colonies on other stands some distance away. When the empty hives are all filled I run the other swarms into the old hives, and continue so during the swarming season. I also take a couple of frames filled with honey from each of these old hives, putting frames of foundation in their places before running in the new swarm. I save the frames of honey for fall use. Please tell me what you think of this plan.

3. A recent number of the American Bee Journal advises beekeepers to put their colonies into winter quarters having a large number of young bees. How is this done?

4. Some one speaks of having sheep keep down the grass in the bee-yard. Is there not danger that they will tip over some of the hives?

ANSWERS.—1. A T tin is a support of tin which has a flat bottom with an upright central part to give it rigidity; so called because a transverse section is the shape of the capital letter T upside down. Its advantages are that it takes up very little room, and is of great strength.

2. The plan is old, and properly managed may work all right. At any rate, the first part, running swarms into the hives with old combs will work well.

3. If you have none but strong colonies in the fall, you are likely to have plenty of young bees; so double up weaklings. Sometimes it happens that the honey harvest closes quite early, and there is no fall flow to keep the queen laying, so the bees may all be pretty old; in that case steady feeding may make the queen lay.

4. I don't know whether it works the same with others; but in my own experience neither cows nor horses are so bad as sheep about pushing hives off their stands. I suppose they do it by rubbing.

Yes, there's a lot for any of us to learn, and I should feel well satisfied if I could learn how to get 75 pounds of honey per colony each year and increase 50 percent, as you have done.

### Detecting Adulterated Beeswax.

I extract wax, sometimes doing it for other people. Now, suppose I had a lot of comb that originally was of the adulterated brand. The question is, "Has the adulteration been removed by the bees?" If it is still there will a Ferris or any other wax-extractor remove it in part, or, if not, can it be detected by analysis? I pride myself on pure, absolutely pure wax, and hope some time to handle more of it. When I extract a lot of wax, I use a piece of that lot for a gauge, and test other lots as per instructions found in the "ABC of Bee-Culture". I am innocent of any intention to cheat, but I am cheated myself, not by those from whom I receive comb, but from the original makers of the comb. You will see, if I use a piece of that lot, my gauge will test all other lots as pure when they are not. Is there any other way to make myself absolutely sure, outside the alcohol and water test?

MASSACHUSETTS.

ANSWER.—My good friend, you are evidently troubled with a conscience, but in the present case I think the trouble need not be very great. Some years ago the number of those who manufactured comb foundation in this country was very much larger than it is now, those who at that time made it merely for their own use, having found that it was in the long run cheaper to buy it from those who made a special business of foundation-making. This would not be the case unless the purchasers were confident they were buying straight goods. I have bought foundation ever since there was foundation to buy—never made an inch of it myself—and I have no more thought as to its being adulterated than I do of the milk that comes from my own cow. The great bulk of foundation in this country being made by a few establishments that are above suspicion, there is little chance on the face of it for there coming into your hands old combs to be melted up, which combs have been made from adulterated foundation, simply because in the nature of the case there can not be much of such stuff in the country.

Now let us turn aside a minute and consider conditions in Europe. Thousands of Rietsche foundation presses (I think more than 15,000) are in use there, largely because the only way bee-keepers can be entirely sure they are getting pure foundation is to make it themselves; some of the foundation on the market being reported as being composed of only one-fourth beeswax. Now, did you ever stop to think why they object to buying the adulterated article? If it worked all right when given to the bees, they wouldn't know it was adulterated. Indeed, if comb foundation could be made of pure paraffin, and it work just as well as that made of beeswax, I am inclined to think I should use paraffin foundation because of less cost. The reason they object to it is that such foundation can not be used by the bees, being so much out of shape that no bee-keeper would allow it in his hives. So if it were possible that such comb could be used by the bees till old and black, you would probably detect it at first glance as having cells out of shape. I think no one has yet reported that adulterated foundation was worked out into perfect comb.

Answering specifically your question as to your gauge, and the danger of your using an impure article to gauge by, there's no need of your running any risk in the matter. Don't use anything to test by that you are not absolutely sure is pure wax, just as it came from the bees. That's an easy thing; for you can in a very few hours' time, without using any foundation in it, get the bees to build you a piece of comb sufficiently large for your purpose.

### Feeding Bees in an Observatory Hive.

I have a 1-frame observatory hive which I kept in a bedroom window last spring and summer. During a cool and rainy spell in the late summer it was necessary to feed the bees, and I did so very nicely from a saucer on the window-sill for a week or more, when the bees from hives in the garden—perhaps 100 feet from the house—began robbing, and I was obliged to give up the hive entirely, much to my regret.

Can you give me a plan for feeding bees in an observatory hive, and can I keep such a hive in the house through the winter?

NEW JERSEY.

ANSWER.—The best thing is to take a frame of sealed honey, even if you have to take it from some full colony, lift the frame out of the observatory hive, put in the frame of honey, and carefully brush the bees onto it. If such a comb is not available, perhaps Scholz or Good candy can be used. Take a very little best extracted honey, heat it (be sure not to burn it), stir in all the pulverized sugar it will take, then put it on a board and knead in what more sugar you can, making a very stiff dough. Put this candy on top of the frame, or anywhere in the hive where the bees can get at it.

### Rearing Queens—Manipulating Supers and Covers—Queenless Colony—Shaken Swarms—Entrance in Winter.

1. If a colony of black bees that are queenless are given a frame of brood from a colony of Italians, will the blacks rear an Italian queen?

2. How do you manipulate supers and covers to avoid killing bees?

3. How can one tell when a colony is queenless, or is going to swarm, without examining the frames?

4. Do you wait until a colony starts queen-cells before making shaken swarms?

5. How wide an entrance should bees have during cold weather if wintered on summer stands, well protected from north and west winds?

VIRGINIA.

ANSWERS.—1. Yes, you can't tell any difference between a queen reared by a black colony and one reared by an Italian colony, provided the egg is laid by the same queen.

2. About the only thing I can tell you is not to set squarely down a cover or super, but to "play" it down, if I may use the expression. Whether it be a cover or a super, set one end on the hive, then play on the other end, first letting it go down within 2 or 3 inches of its resting-place, then raise it an inch or so, then lower it till it is an inch or so above the hive, raise it an inch or so again, then let it go closer down than before, and keep on letting it go closer each time till you let it down entirely. Each time you let it down a little it will squeeze some of the bees enough so they will get out of the way, and when you finally let it down there will be no bees in the way. It sounds long in the telling; but it is really done very quickly.

3. I can't.

4. Yes, I always do; because, all things considered, that suits best in my case; but in some cases it might be advisable to make a wholesale business of it and shake all as soon as the first make preparations for swarming.

5. Depends somewhat on strength of colony and depth of entrance. A strong colony may have an entrance the whole width of the hive if it is  $\frac{3}{4}$  deep; and in general the entrance may amount to 3 or 4 square inches, with half that for a weak colony.

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get them subscriptions, for which work we offer valuable premiums in nearly every number of this Journal. You can aid much by sending in the names and addresses when writing us on other matters.





## Convention Proceedings

### THE ST. LOUIS CONVENTION.

**Report of the 35th Annual Convention, of the National Bee-Keepers' Association Held at St. Louis, Mo., Sept. 27-30, 1904.**

(Continued from page 26.)

The President called upon Prof. Frank Benton to read a paper, which is as follows:

#### WORK IN APICULTURE AT THE UNITED STATES DEPARTMENT OF AGRICULTURE.

At the meeting of the North American Bee-Keepers' Association, held at Washington, D. C., December 27-29, 1892, Dr. C. V. Riley, then Entomologist of the Department, presented quite a review of what the Department of Agriculture had done, and what he conceived it could do for apiculture. Since it fell to me to prepare all of the data for this article I shall feel at perfect liberty to draw upon it freely in a brief review of what the Department has already done in apiculture. In most instances, however, I shall quote literally from the communication presented under the name of Dr. Riley.

Dr. Riley started out by an allusion to the wisdom of establishing as a part of the government machinery, a Department of Agriculture charged with doing all it can to foster and encourage agriculture in all its branches. He believed that the advisability of this would not be questioned by any one who had made himself familiar with the work of the Department since its organization, first as a mere chair in the Department of the Interior, then a separate Commission, and later a department coordinate with the others, with representation in the Cabinet of the President. He believed, and I think with good reason, that, notwithstanding some things in the administration of this great Department might be better if changed, yet on the whole there exist fewer abuses and abnormal conditions in the Department of Agriculture than in any other of the Departments of the government. The great body of workers connected with the Department are earnestly interested in the branches which they represent, and devote practically all of their energies to the furtherance of the work in hand. It has been my lot to be associated in various capacities with these workers during the past thirteen years, and I have come to appreciate most thoroughly the beneficial character of their work, and their singular devotion to it. I can also easily understand how Dr. Riley remarked in his article that "some of the most beneficent and far-reaching work of the Department was done during its earlier history, when its means were limited, and when the field was fresh, and the opportunities relatively greater." He then proceeds to state that: "It has been the desire of almost everyone who has been at the head of the Department to pursue a broad and liberal policy to the end that all the branches of rural economy might receive their due share of attention. He states, then, the fact that must be apparent at once to all, namely, that, "The head of the Department is, however, helpless without Congressional aid and sympathy, and it has too often happened that investigations which promised valuable results have been abandoned because of the failure of Congress to make the needed appropriations." Then, after an allusion to the direct value of the products of bees, and the far greater value which results to the country through the fertilization of our seed and fruit producing plants, Dr. Riley says:

"Fifteen years ago, when I first accepted a position in the Department, there was provision only for an entomologist without assistants or means for any experimental or field work. During the next four or five years I succeeded in impressing the Commissioner of Agriculture and Congress with a sense of the importance of the work to be done in efforts to counteract the ravages of injurious insects, and the appropriations for both office

assistants and field-work increased. But the self-evident advantage of endeavors to protect the farmer from some part of the immense losses occasioned by insects, had to fight its way into recognition. It was not until 1885 that the more important work done in counteracting the ravages of injurious species had sufficiently advanced to justify my giving some attention to apiculture, and the fact that nothing more resulted from the work begun may, to some extent, be laid to the lack of effort on the part of the bee-keepers themselves, i. e., to their failure to take united action, such as would bring home to the head of the Department, and to those in charge of the general appropriations, the needs and just demands of the industry.

"However, that considerable has been done by the Department, and through its agency, for bee-keepers—much more, probably, than most of you are aware of—the published reports of the Department show. These reports, hundreds of thousands of which have been distributed very generally over the land, have surely had their influence in the promulgation of intelligent and humane culture of bees. Beginning about the time of the first edition of Langstroth's celebrated work, or nearly a decade before any bee-periodical had been printed in the English language, the Department reports have from year to year given some notice of progress in bee-culture, statistics of honey and wax production, and on several occasions excellent little treatises on bees and bee management. Notable among these is the article on the nature and habits of the honey-bee, in the report of 1857. I cannot give the name of the author, as only the initials of the Chief Clerk of the Patent Office are attached to it. In 1860, Mr. William Buckisch, of Texas, gave, in an extended article, a review of bee-culture as practiced by Dzierzon and his school. The essay by my old friend, Mrs. Ellen S. Tupper, of Iowa, published in the report of 1865, and covering her theory of bee-keeping, was widely read and frequently quoted, creating much interest in improved methods.

"The introduction of Italian bees into this country is certainly one of the advances in bee-culture which ranks second only to the invention of the frame hive, the honey extractor, and the comb foundation machine. But how many even now know that the Department of Agriculture had anything to do with the matter? Leading text-books on apiculture are silent on this head. The fact is, however, that the first successful importation of Italian bees from their native land to America was made by the Department, and it was almost wholly from this importation that such skillful apiarists as Langstroth, Cary, and Quinby bred and disseminated the race during the early '60's."

It must be remembered of Dr. Riley that he was a man of brilliant conception, and also kept in close touch with popular sentiment and growth in all matters pertaining to agriculture, and that naturally wherever his own field of economic entomology was concerned, he was in the front as to its needs and possibilities. He was not a skilled bee-keeper, nor, in fact, could he ever have been classed as a bee-keeper, but, nevertheless, he had, many years before his connection with the Department, manipulated bees to some extent, and had made some study of methods in apiculture, as well as of the habits of the bees themselves, so that it is not surprising that he was disposed to view favorably, in 1885, the establishing of an apicultural experiment station in connection with the entomological work of the Department. In this he was earnestly supplemented by Mr. N. W. McLain, who was, I believe, an old time acquaintance and an enthusiastic bee-keeper, and who became the first appointee. There was, at the time, no special appropriation for apiculture, nor indeed anything of the kind during the whole of Dr. Riley's administration of the office of entomologist. I mention this to show that all the more credit is due to Dr. Riley in connection with the work then undertaken, and which, though interrupted through lack of funds, he resumed later. The funds to initiate this work, and to continue it for a period, as well as to resume it after the interruption just mentioned, were drawn from the general appropriation for the Division of Entomology, and were diverted by the entomologist himself from the general insect-work to this special purpose in the belief that he was fulfilling both the letter and the spirit of the law which authorized the expenditure of certain sums for the promotion of economic entomology.

Just here I must digress somewhat, lest those familiar

with what has been printed on this subject should call me to account for the above statements, by referring to a biographical sketch of Mr. W. K. Morrison, which is found on page 554 of *Gleanings in Bee Culture* for July 15, 1898. This article was written by Mr. A. I. Root, and submitted by him to Mr. Morrison himself. Mr. Root says, concerning Mr. Morrison:

"While at Washington he became intimately acquainted with Senator Teller, Secretary Rusk, Senator Plumb, and others. As he still held on to his interest in bee-culture, at an opportune time, as it seemed to him, he was permitted to urge that an appropriation of \$5,000 be made for the benefit of bee-culture in the United States, and he was successful in securing this appropriation. Prof. Cook took hold of it about a year after the money was given, and I do not know but friend Cook had the credit of it, although Mr. Morrison, if I am correct, was the first mover in the matter, and the one who finally secured the enactment."

When the article was submitted by Mr. Root, to Mr. Morrison, including this paragraph, the latter made as a comment, over his own initials, the following statement:

"Besides myself and the secretary, no one knew. Dr. Tinker was the first to know. Secretary Rusk pledged the Senate committee not to spend money on the study of wild bees, but to put the money to practical purposes. Prof. Riley did not like this. Secretary Rusk also pledged himself in writing that I should be the first appointee."

Nothing can be further from the truth than the statements here made. There was no enactment whatever, nor appropriation of \$5,000, nor any other sum for apiculture at the time indicated (1885-87), nor, in fact, was

there ever a special appropriation for apiculture previous to the year 1901. The following table taken directly from the records of this department will show that, aside from the appropriation for general work, the only specific appropriations made were in the years 1887 to 1890, when provision was made for experiments in silk culture.

APPROPRIATIONS FOR THE DIVISION OF ENTOMOLOGY.

Year ending June 30	Salaries	General expenses for entomological investigation	Specific appropriation for silk culture
1884.....	\$7900	\$20,000	.....
1885.....	7900	20,000	.....
1886.....	7900	25,000	.....
1887.....	7300	15,000	\$15,000
1888.....	7300	20,000	25,000
1889.....	7300	20,000	30,000
1890.....	7300	20,000	30,000

It is a manifest injustice also to the memory of Dr. Riley to intimate that he wished to spend the money on the study of wild bees to the neglect of practical apiculture itself. Dr. Riley was eminently a practical man, and the fact that he did divert from the general sum appropriated during a series of years for entomological investigations a certain portion to experimental work in apiculture, is proof of itself that he was disposed in a kindly manner toward this industry, and saw the possible benefits which could result from scientific investigations of problems connected with the industry. I cannot regard as any more felicitous the intimation that the first Republican secretary of agriculture, whose record in other respects is above reproach, should have broken a pledge given in writing.

(Continued next week.)



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Please Mention the Bee Journal when writing Advertisers\*\*



## Reports and Experiences

### Bees in Good Condition.

I have now 30 colonies of bees all packed well for winter, with plenty of honey. We sell all our honey around town at 13 cents per section, or two sections for 25 cents, unless they weigh less than a pound, when we sell them at 8, 10 or 12 cents, according to their weight. Or we use them for our own table, or sometimes give them away.

Alleghany Co., N. Y.

G. HODGES.

### Moving Bees—Cleaning Sections—Black Brood—Honey-Cases—Brood-Frames.

I moved 35 colonies about 300 yards by closing the entrances. I plunked them on an old wheelbarrow, jarred them over the gravel-stones, placed them in position, opened the entrances at once and got out of the way. I don't think a hundred bees came back out of the lot.

I tried wire-cloth for cleaning sections. It made the wood rough and left the propolis on. A heavy paper well oiled, and fastened around the edges of a hive-cover with strips of wood, is good enough here. The same thing with old newspapers underneath, tacked around the body of a hive, is a good winter protection. Let the warm air bring the bees out, not hot sun on the hive.

Black brood appeared in both States along the Delaware River during the summer. And I think the Alley cure is a master stroke, and a fame winner, judging from the experience I had with it. I tried fresh Italian blood, but it was no help that I could discover. Some of these became the worst cases in the lot.

I don't think queens have anything at all to do with disease. I took queens out of diseased colonies and placed them at once in healthy colonies, and no disease followed. I think the claims made for the Italians in many respects are greatly overrated, except that of gentleness in handling.

For 2 years I have made honey-cases 5-row 5 in a row, and notice others in the market this year. They make a fine appearance, and are handy to crate up in even hundreds.

The "Hunsberger A. C. Frame," as it is called, mimics the catalogs, and is simply the



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"Edge drop" planters are no good unless the seed is of even size and perfect shape. I breed corn with perfect and uniform kernels and I grade all my shelled seed with a specially constructed mill that throws out every uneven, round or thick kernel better than you could possibly do it by hand. Every kernel must be just like every other—even, flat, just right. That means even, accurate planting and a perfect stand. No trouble, no delay. All my shelled seed is screened this way, a feature no other seed man can offer. Samples and catalog free.

Henry Field, Seedman, Box 50, Shenandoah, Iowa

"The ear seed corn man."

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Made of artificial stone. Practically indestructible, and giving entirely satisfactory results. Comb foundation made easily and quickly at less than half the cost of buying from the dealers. Price of Press, \$1.50—cash with order. Address,

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Everything used by Bee-Keepers.  
POUDER'S HONEY-JARS.

Prompt Service.  
Low Freight Rates. ... Catalog Free

You are entitled to Special Discounts for Early Orders till April first.

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Send for Our 1904 Catalog and Price-List.

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By sending in your order now, you will SAVE MONEY, and secure prompt shipment.

We will allow you a cash discount of 3 percent on orders sent in during January.

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LIBERAL DISCOUNTS on all orders till Jan. 1, 1905.

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To absolutely please bee-keepers in filling their wants has been our constant aim for eight years, and while we do not boast about ourselves we are sure that we are excelled by nobody. If you are not already a customer don't fail to write to us and tell us your wants.

Bees, Supplies, Honey and Beeswax.

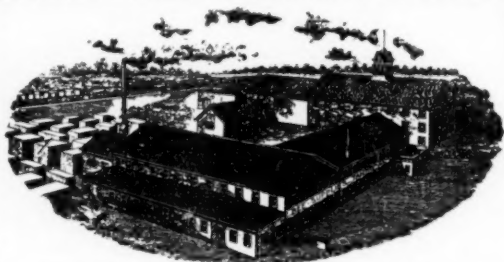
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We carry a large stock and greatest variety of everything needed in the Apiary, assuring BEST goods at the LOWEST prices, and prompt shipments. We want every beekeeper to have our FREE ILLUSTRATED CATALOG, and read description of Alternating Hives, Massie Hives, etc. WRITE AT ONCE FOR CATALOG

AGENCIES.—Trester Supply Co., Lincoln, Neb.; Shugart & Ouren, Council Bluffs, Iowa; Fulton & Ford, Garden City, Kan.; I. H. Myers, Lamar, Colo.; Southwestern Bee Co., 438 W. Houston St., San Antonio, Tex. **KRETCHMER MFG. CO., Red Oak, Iowa.**

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## \$4.00 Per Thousand

No. 1 Bee-way or Scalloped SECTIONS,  $4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{1}{8}$ , for No. 1 beehive. For a limited time, at per thousand, \$4.00.

Send for prices on other lines of goods. We save you money.

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Power Building, MINNEAPOLIS, MINN.

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Please mention the Bee Journal. 36A26t



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Let us quote you prices on Sections, Hives, Foundation, etc., as we can save you time and freight. Beeswax Wanted for Cash.

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E. Grainger & Co., Toronto, Ont., Sole Agents in Canada for Dittmer's Foundation.

**GUS DITTMER, Augusta, Wis.**

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Danzenbaker frame with the rivet placed higher up, a saw-cut made in the center of lower end of the end-pieces, and the lower bar is made thin and placed in edgewise instead of flat. A strip of comb foundation is folded over it. The burlap is tucked in behind the end-frames. And it's a frame that handles and "gets there" in every respect—no toppling over or sticking.

Bee-keepers, come along with your experience and opinions. Fill up this end of the Journal. Never mind the big guns. We hear them bang all the time. It's the fellow that's not doing the same thing in the same old way that we all want to hear from.

A. C. HUNSBERGER.

Northampton Co., Pa., Jan. 9.

### Made Little More than a Living.

The bees in this section of Ohio have made little more than a living. My bees have very little care, and therefore can not be expected to do much for their owner. I sell my honey at 15 to 18 cents per section.

The bees had a good flight on Dec. 27, but the next day the thermometer was 14 degrees above zero, so they will stay in for a while now.

HENRY BEST.

Carroll Co., Ohio, Dec. 29.

### Open Winter—Moving Bees—Queens Fighting.

I enjoy reading the Bee Journal. I get it every Friday and read it first, and in almost every number I find something that is worth the price of my subscription.

My honey crop was very light last year. I will have to feed some. The winter has been very open. So far the bees have flown almost every day. They were out till almost sundown Dec. 1, 1904, something which is not very common in this locality.

I see a good many inquiries about moving bees. I moved mine about 40 rods last spring and there were very few that went back. I stopped up the entrances with grass, putting

## THE FRUIT-GROWER

ST. JOSEPH, MISSOURI

is the first authority for farmers and fruit-growers in the great fruit-growing centers. The April number will be a "special" devoted to an extended discussion on the profitable raising and marketing of

**Small Fruits** Every berry-raiser, every

farmer, should get this as

well as every other number of this paper.

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Are Equally Valuable. Very large stock Oats, Corn, Barley, Speltz, Clover, Timothy, Rape, Millet, Garden Seeds, Fruits, Poultry Supplies, etc. Gold Medal Awarded at St. Louis. 80-Page Catalog Free. L. L. OLDS SEED CO., Drawer G, Clinton, Wis. Please mention Bee Journal when writing



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### PRAIRIE STATE INCUBATORS AND BROODERS

acknowledged by experts to be the most profitable machines made. Winners of 385 First Prizes. Write for free catalog with proof and valuable information for beginners.

**Prairie State Incubator Co.**  
Box 354, Homer City, Pa.

three hives on a hand-cart at one time, and had little trouble with the exception of one 2-story hive that was full of bees in both stories. In lifting it over, or rather through, a barbed-wire fence the top wire caught the cover of the hive and lifted it off, and the bees got out on my assistant in such a manner that he had to desert me. So that left me with the hive balanced on the fence, the top off, bees boiling out, no smoker, no veil, no help. Well, I had to take my medicine. It was a pretty strong dose, but I finally got them set down. They were slightly jarred in the operation, and I have not had any rheumatism since. Moral: Don't move bees without fastening the hive top and bottom securely.


Have any of the bee-keepers seen two queens fight, or is it such a common thing that it is not mentioned? It is not common to me, so I will try to tell my experience in that line. I got to the bee-yard about 9 o'clock one morning (it is 5 miles from home), and walking across the yard I noticed a few bees fly up. I looked down to see what called so many in one place, and I found one of the queens that I had clipped. I did not know where she came from, so I took her to a hive that I thought to be queenless, and put her on top of the frames. The bees came up and appeared to be glad of her presence. They seemed to feed her and clean her off. I left them for a few minutes, then went back to the hive, and lifting out the frame I supposed she was on, I found her and an inferior black queen about one inch apart, going toward each other. The black was the quicker of the two. She jumped against the yellow queen, knocked her on her side, and stung her.

Mason Co., Ill., Jan. 2.

FRED TYLER.

#### An Octogenarian's Testimony.

I have 3 colonies of bees left. A few years ago I had 24, but they began to go, until now I have only this small number. I have taken



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Green Bone and Vegetable Cutter

will double your egg yield and cut your feed bill in half. Guaranteed to cut easier and faster than any other. Trial offer and catalogue free.

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## 450,000 TREES

500 varieties. Also Grapes, Small Fruits etc. Best rooted stock. Genuine, cheap. 2 sample currants mailed for 10c. Desc. price list free. Lewis Keesee, Fredonia, N. Y.



### Clean Clothes

100 pieces an hour—all clean with **BUSY BEE WASHER**. No injury to finest fabrics. It's simple, quick, cheap. Agents Wanted. Address


Busy Bee Washer Co., Box E, Erie, Pa.

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HATCHING CHICKENS WITH THE **GEM INCUBATOR**

that high-grade, low priced, absolutely reliable, up-to-date hatcher. Sure profits. Begin now—get an early start. Write for free catalog today.

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### IT IS A FACT

that poultry pays a larger profit for the money invested than any other business; that anybody may make a success of it without long training or previous experience; that the **Reliable Incubators and Brooders** will give the best results in all cases. Our **20th Century Poultry Book** tells just why, and a hundred other things you should know. We mail the book for 10 cents. Write to-day. We have 115 yards of thoroughbred poultry.

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JAMESTOWN, N. Y.

W. M. Gerrish, Epping, N. H., carries a full  
line of our goods at Catalog prices. Order of  
him and save the freight.

## Engravings For Sale

We are accumulating quite a stock of engravings that have been used in the American Bee Journal. No doubt many of them could be used again by bee-keepers in their local newspapers, on their stationery, or in other ways. Also, if we can sell some of them it would help us to pay for others that we are constantly having made and using in our columns. If there is any of our engravings that any one would like to have, just let us know and we will quote a very low price, postpaid. Address,

### GEORGE W. YORK & CO.

334 Dearborn Street, CHICAGO, ILL.

bors got a little over 1400 pounds from 11 colonies. I now have 11 colonies myself.

I want to give my testimony in favor of bee-stings for rheumatism. Eight years ago I had it about as badly as people generally have it. The first attack I had put me in bed for 5 months, and I had never been rid of it since until last winter, when it left me altogether, and for a year or more I have been free from it.

Last year was hard on bees. They were mad all the time, and there was hardly a day that I did not get stung from one to 20 times, and once while hiving a swarm one of my neighbor's boys pulled 34 stingers out of my face and neck, and my hands and wrists were full, too. I never swelled a bit, but the rheumatism left me.

CHARLES W. HOPSEGER.

Skagit Co., Wash., Dec. 29.

### Bees Wintering Well.

Our bees are wintering well. We are having nice weather, and they have a flight about every week.

There is not much demand here for honey. We have quite a lot on hand yet.

Dixon Co., Nebr., Jan. 3. R. CHINN.

## Honey-Jars & Honey-Vinegar



We can ship at once on receipt of order, 1-lb. and 3-lb. Tip-Top Honey-Jars, (octagon shape) at these prices, f.o.b. Chicago:

1-lbs. per 12-doz. crate, \$5.00;  
3 crates, \$13.50.  
3-lbs. per 14-doz. crate, \$5.25;  
3 crates, 14.00.

### YORK'S HONEY-VINEGAR

This is a new thing, made by The York Honey Co., and should be used by all who also buy and use honey. Furnish it to your home trade. Sample, postpaid, 10 cents, to pay postage and package. A 10-gal. keg for \$3.00, f.o.b. Chicago.

Cash with order in all cases. Address,

### The York Honey Co.

HENRY M. ARND, Mgr.  
101 E. KINZIE STREET, CHICAGO, ILL.

## ALLOWED ON EARLY ORDERS FOR

Let me SELL or BUY your

## HONEY

If you have some to offer, mail sample with lowest price expected, delivered Cincinnati.

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State quantity and kind wanted, and I will quote you price. I do business on the cash basis, in buying or selling.

FULL STOCK OF

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THE BEST MADE.

Root's Goods at their factory prices. SEEDS for honey-plants.

## C. H. W. WEBER,

2146-48 Central Ave.  
CINCINNATI, OHIO.

Please mention Bee Journal when writing.

## Honey and Beeswax

CHICAGO, Dec. 7.—The market is well supplied with all kinds of honey; the demand is of a light nature. Fancy comb honey brings 14c, but quality as well as appearance is necessary; No. 1 sells at 12½@13c; off grades difficult to move at 14c less. Extracted, choice white, 7@7½c; amber, 6@7c, with off grades about 5½c per pound. Beeswax, 30c.

R. A. BURNETT & CO.

NEW YORK, Jan. 9.—The market on comb honey is decidedly dull, and while there is no stock of dark and buckwheat to amount to much, all grades of white honey are plentiful, and for the present we cannot encourage shipments. We quote fancy white at 14c; No. 1 at 13c; No. 2 at 11@12c; buckwheat at 10c. Extracted honey is in fair demand, with abundant supplies and a weakening tendency is noticeable in the market. We quote white at 6@6½c; light amber at 5½@6c; dark, 5@5½c per pound; Southern at 52@55c per gallon. Beeswax, 29c.

HILDEBRATH & SEGELKEN.

KANSAS CITY, Jan. 9.—The demand for comb honey still continues light, as most of the retail dealers were stocked up on \$2.25 honey before the holidays, two cars of which were sold here at that time. We look for a better market in the near future, and quote: Fancy comb, 24-section cases, \$2.50; No. 1, \$2.25. Extracted, white, per pound, 6@6½c; amber, 5½@6c. Beeswax, No. 1, 28@30c.

C. C. CLEMONS & Co.

PHILADELPHIA, Jan. 9.—The market is unchanged from our last quotations, and trading light. We quote: Fancy white, 15@16c; No. 1, 13@14c; amber, 11@12c. Extracted, white, 7@8c; amber, 6@7c. Beeswax, 26c.

We are producers of honey and do not handle on commission. WM. A. SELSER.

BOSTON, Jan. 9.—The market is without change since last writing. The demand con-

tinues light, and supply is more than ample. We quote: Fancy white, 16c; A No. 1, 15c; No. 1, 14c, with practically no demand for No. 2. Extracted, from 6@8c, according to quality.  
BLAKE, SCOTT & LEE.

CINCINNATI, Dec. 30.—Since our last report was published, the price of extracted honey has advanced, no doubt acting in sympathy with the sugar market. We quote amber extracted in barrels at 6@6½c; white clover, in barrels and cans, 6½@8½c. Fancy comb honey, 13@14c. Beeswax, 28c.

THE FRED W. MUTH CO.

ALBANY, N. Y., Dec. 26.—Comb honey is moving off very well considering the heavy receipts and cold weather. Prices not as high as early fall, as usual, but very good yet. Fancy white, 14@15c; No. 1, 13c; mixed, 12@13c. Buckwheat, 11@12c; mixed, 10@11c. Extracted, dark, 6@6½c; light, 6½@7c. Beeswax, 28@30c.

H. R. WRIGHT.

CINCINNATI, O., Dec. 19.—Comb honey is now coming in more freely, and prices if anything have moderated a little. The sales made and prices obtained were for No. 1 fancy water-white comb, 12@13½c; single cases, 14c. Extracted is sold as follows: White clover, in barrels, 6½c; in cans, 7½@8c; amber, in barrels, 5½@5¾c; in cans, 6@6½c. Beeswax, 27c.

C. H. W. WEBER

SAN FRANCISCO, Jan. 4.—White comb, 1-lb. sections, 11½@12½c; amber, 9@11c. Extracted white, 6@6½c; light amber, 4½@5½c; amber, 3½@4½c; dark amber, 3@3½c. Beeswax, good to choice, light, 29@30c; dark, 27@28c.

Market is quiet and not noteworthy for strength. Although stocks here and throughout the interior are light, there is little inquiry, either for shipment or on local account. There is strong probability, however, that the spring trade will absorb the light stocks remaining.

## HONEY AND BEESWAX

When consigning, buying or selling, consult

R. A. BURNETT & CO.,

166 SOUTH WATER ST. CHICAGO, ILL.

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## Wisconsin Basswood Sections

And Prompt Shipments

Is what we are making for our customers.

### DOVETAILED HIVES AND SHIPPING-CASES

We carry a full line of SUPPLIES. Ask for Catalog.

THE MARSHFIELD MANUFACTURING CO., Marshfield, Wis.

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Special Agents for Southwestern Illinois and Vicinity.



As is customary with all large concerns, we have Agencies or jobbers in different parts of the United States, where our goods are carried in stock. If you are located near any of those named below it will save you time and freight charges to send your order to them. Where the distance is not so great from Watertown to the agency, these jobbers sell the goods at our regular catalog prices.



<b>LEWIS' GOODS</b> E. H. TAYLOR,	IN	<b>EUROPE</b> Welwyn Herts, Eng.
<b>LEWIS' GOODS</b> C. B. STEVENS & Co.,	IN	<b>CUBA</b> 11½ Lamparilla, Havana, Cuba
<b>LEWIS' GOODS</b> PAUL BACHERT,	IN	<b>CALIFORNIA</b> Acton, Calif.
<b>LEWIS' GOODS</b> ROBT. HALLEY, Montrose, Colo. Arkansas Valley Honey-Producers' Association, Rocky Ford, Colo. Fruit Growers' Association, Grand Junction, Colo. Colorado Honey Producers' Association, Denver—Loveland, Colo.	IN	<b>COLORADO</b>
<b>LEWIS' GOODS</b> CHAS. H. LILLY & Co.,	IN	<b>WASHINGTON</b> Seattle, Wash.
<b>LEWIS' GOODS</b> FRED FOULGER & SON,	IN	<b>UTAH</b> Ogden, Utah
<b>LEWIS' GOODS</b> WISCONSIN LUMBER CO.,	IN	<b>MINNESOTA</b> Faribault, Minn.
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<b>LEWIS' GOODS</b> E. T. ABBOTT,	IN	<b>MISSOURI</b> St. Joseph, Mo.
<b>LEWIS' GOODS</b> DADANT & SONS, Hamilton, Ill.	IN	<b>ILLINOIS</b> A. COPPIN, Wenona, Ill.
<b>LEWIS' GOODS</b> C. M. SCOTT & Co.,	IN	<b>INDIANA</b> 1004 E. Washington St., Indianapolis, Ind.
<b>LEWIS' GOODS</b> FRED W. MUTH CO., 51 Walnut St., Cincinnati, Ohio. NORRIS AND ANSPACH, Kenton, Ohio.	IN	<b>OHIO</b>
<b>LEWIS' GOODS</b> A. G. WOODMAN,	IN	<b>MICHIGAN</b> Grand Rapids, Mich.
<b>LEWIS' GOODS</b> SOUTHWESTERN BEE CO.,	IN	<b>TEXAS</b> San Antonio, Texas



# G. B. LEWIS CO., Watertown, Wis., U.S.A.

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